

Abstract

Disclosed is an active power filter with a reduced VA rating for reducing harmonic currents in a neutral line in a three-phase four-line power system. An inverter is connected to the neutral line for PWM-controlling current flow of the neutral line based on a voltage control signal from a controller so that a fundamental component of a load-side neutral current flows to the three-phase AC power source and its harmonic component is circulated to the load. A transformer is connected between the neutral line and each phase line of the three-phase AC power source for forming a current path whereby the harmonic component flows to the load through the phase line. A rectifier is connected between the transformer and the inverter for rectifying drive voltage into DC voltage and applying it to the inverter.



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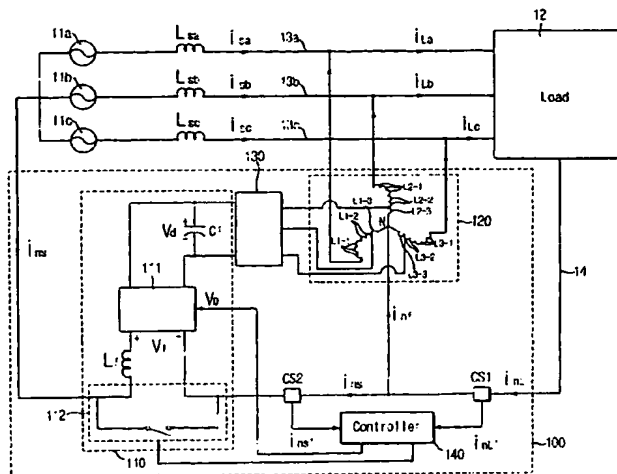
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(54) Title: ACTIVE POWER FILTER APPARATUS WITH REDUCED VA RATING FOR NEUTRAL CURRENT SUPPRESSION



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